

Serial No. - 09/008,531  
Art Unit - 2823

*End.*

forming a layer of conductive material over the underlayer having a topography that includes a substantially vertical component;  
forming an overlayer over the said layer of conductive material;  
etching a contact hole in said overlayer; and  
forming a contact in said contact hole disposed adjacent to and contacting said vertical component.

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22. A process as claimed in claim 21 wherein said vertical component defines a localized thick region in the layer of conductive material.
23. A process as claimed in claim 21 wherein said vertical component is a spacer.
24. A process as claimed in claim 21 further comprising the step of forming a structure having an opening therein under said conductive layer and filling said opening with said conductive material to form said vertical component.
25. A process as claimed in claim 21 wherein said conductive layer is a capacitor electrode.
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26. (Amended) A process for making a semiconductor device having an improved contact to a conductive layer comprising the steps of:  
providing a first layer of material and forming an opening therein, said opening including sidewalls;  
forming a layer of a first conductive material on said first layer of material and along the surfaces of said sidewalls of said opening to form a localized thick region;  
forming an overlayer of material on said layer of said first conductive material;

10 *Ad.* [forming] etching a contact hole in said overlayer and an amount of said layer of  
said first conductive material which communicates with said layer of said first  
conductive material; and

substantially filling said contact hole in said overlayer with a second conductive  
material which differs in composition from said first conductive layer and which contacts  
said first conductive material.

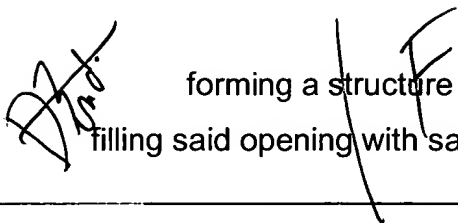
27. A process as claimed in claim 26 in which said first conductive material forms  
spacers on said sidewalls of said opening.

28. A process as claimed in claim 27 in which said second conductive material  
contacts at least said spacers.

29. A process as claimed in claim 26 in which said first conductive material  
comprises polysilicon and said second conductive material comprises a metal.

30. A process as claimed in claim 26 in which said first layer and said overlayer  
comprise insulating materials.

31. (Amended) A process for making a semiconductor device comprising:  
providing a substrate having at least one semiconductor layer;  
forming a conductive layer over said at least one semiconductor layer having a  
topography that includes a substantially vertical component;  
forming an overlayer over said conductive layer;  
forming a contact in said overlayer disposed adjacent to and contacting said  
vertical component; and

 forming a structure having an opening therein under said conductive layer and filling said opening with said conductive material to form said vertical component.

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32. A process as claimed in claim 31 wherein said vertical component defines a localized thick region in the layer of conductive material.

33. A process for making a semiconductor device comprising:  
forming a layer of conductive material having a topography that includes a spacer;  
forming a contact disposed adjacent to and contacting said spacer.

34. A process as claimed in claim 33 further comprising forming a structure having an opening therein under said conductive layer and filling said opening with said conductive material to form said spacer.

35. A process for making a semiconductor device having an improved contact to a conductive layer comprising:

providing a first layer of material and forming an opening therein, said opening including sidewalls;

forming a layer of a first conductive material on said first layer of material and along the surfaces of said sidewalls of said opening to form a localized thick region, wherein said first conductive material forms spacers on said sidewalls;

forming an overlayer of material on said layer of said first conductive material;

forming a contact hole in said overlayer which communicates with said layer of said first conductive material; and

substantially filling said contact hole in said overlayer with a second conductive material which differs in composition from said first conductive layer and which contacts at least said spacers.

36. A process as claimed in claim 35 in which said first layer and said overlayer comprise insulating materials.

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37. (Amended) A process for making a semiconductor device having an improved contact to a conductive layer comprising:

providing a first layer [of] and forming an opening therein, said opening including sidewalls;

forming a layer of a first conductive material on said first layer of material and along the surfaces of said sidewalls of said opening to form a localized thick region, said first layer of conductive material comprised of polysilicon;

forming an overlayer of material on said layer of said first conductive material;

forming a contact hole in said overlayer which communicates with said layer of said first conductive material;

substantially filling said contact hole in said overlayer with a second conductive material which differs in composition from said first conductive layer and which contacts said first conductive material, said second conductive material comprised of metal.

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38. A process as claimed in claim 37 in which said first layer comprises silicon dioxide said overlayer comprises boro-phospho-silicate glass.

39. A process as claimed in claim 37 wherein said contact hole is positioned directly above said opening and said thick region.

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40. (Amended) A process for making a semiconductor device comprising:

providing a substrate having at least one semiconductor layer;

forming a conductive layer over the at least one semiconductor layer having a thick region;

 forming an overlayer over the conductive layer; and

forming a contact through the overlayer and physically in contact with the thick region.

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41. The process of claim 40, wherein forming a conductive layer having a thick region comprises forming a layer of conductive material having a thick region having a width greater than other portions of the conductive layer.

42. The process of claim 40, wherein forming a conductive layer having a thick region comprises forming a layer of conductive material having a thick region having a width greater than other portions of the conductive layer and a depth extending below the other portions of the conductive layer.

43. The process of claim 40, wherein forming a contact comprises etching a tolerable amount of the thick region and forming a contact physically in contact with the thick region at a depth deeper than an upper surface of the thick region.

44. A process for making a semiconductor device comprising:

forming a layer of conductive material having at least one thick component;

forming at least one contact, wherein each of the at least one contact is in contact with one of the at least one thick component.

45. A process for making a semiconductor device comprising:

forming an underlayer over a substrate;

etching at least a portion of the underlayer to form an opening; and

forming a conductive layer over the underlayer and forming a thick region of the conductive layer over the opening.